

## ABSTRACT

To enable detection of flow of a distant fluid to be measured to provide a new application of a PIV system at a practical level.

5        A fluid measurement system of the present invention includes a long focus optical system 3 at a CCD camera 2, and an image processing means 43 for comparing particle images taken at two time points for analysis. The long focus optical system 3 is provided with a shield 32 which shields a part including a central portion of a main mirror 31 at an arbitrary shield rate. As  
10 a result, the particle image of a tracer is enlarged with its contour kept clear; that is, in focus, and therefore, the image having a luminance which allows analysis by the PIV method can be taken in spite of use of the long focus optical system.